COMMERCIAL PARTNER

Implementation Model: Customized Utility Incentives

ORGANIZATION TYPE
Grocery

BARRIER
Utility incentives for energy efficiency are often prescriptive and not always relevant to the grocery sector

SOLUTION
- Propose sector-specific incentive package to utility
- Enter into an agreement with utility specifying multi-site regional annual kWh consumption reduction targets with aggregate, streamlined incentive process for Whole Foods locations

OUTCOME
Whole Foods Market has received over $1 million in utility incentives from NSTAR utility and saves over $1.2 million per year in energy and maintenance costs from incentivized upgrades

Overview

Utilities offer incentives to building owners and tenants for energy efficiency upgrades. Energy savings from these upgrades can be significant when aggregated, sometimes negating the need to build a new power plant to meet peak demand. Energy use reductions from these projects can also reduce greenhouse gas emissions and improve air quality. Despite the availability of incentive funds for commercial buildings, many incentive dollars go unclaimed – particularly in the commercial building space. An E-source review of the 2012 non-residential incentive program budgets for 24 U.S. utilities revealed that 45% of the incentive component (money earmarked for customer efficiency projects rather than program marketing or other administrative costs) went unspent.

Whole Foods Market and NSTAR, the utility serving many of Whole Foods' northeast region stores, set out to address some of the barriers that keep commercial buildings from accessing utility incentives. They first signed a memorandum of understanding (MOU) agreeing to a streamlined simple incentive process in exchange for Whole Foods' reduction in total kWh usage. This is a significant departure from the standard "one-for-one switch out" utility incentive approach which tracks what equipment is removed and installed, rather than the actual energy reductions achieved. Since many standard incentive offerings do not apply to grocery stores, the two organizations also worked together to develop a customized set of incentivized energy efficiency measures, then streamlined the incentive application process to facilitate incentive approvals for 20 stores in Whole Foods' North Atlantic region.

Whole Foods Market's Playbook

Policies

Whole Foods Market and NSTAR signed a Memorandum of Understanding (MOU) whereby Whole Foods commits to a specific kWh reduction level across its building portfolio in exchange for increased rebate levels.

Though not a formal policy, it is standard procedure at Whole Foods to reach out to local utilities by phone when considering energy efficiency projects for a store. A conversation, in addition to reviewing incentives that are posted on a utility's website, can help clarify incentive offerings and any custom accommodations the utility may be able to provide to customers.

Process

Two-Phased Engagement with Utilities and Novel Incentive Agreement
Whole Foods had completed a number of energy efficiency projects, taking advantage of standard incentives offered through northeast utility NSTAR. The initial successes built an environment of trust between the two organizations. When Whole Foods reached out to NSTAR to expand and enhance the ways they could collaborate to reduce energy usage at their stores, NSTAR responded with the proposal that they enter into an MOU, which fundamentally shifts the way the utility would track incentives to Whole Foods. Instead of tracking one-to-one equipment or light fixture change-outs as most utility incentives do, NSTAR would simply offer Whole Foods aggressive and streamlined incentives at a simple, fixed rate per annual kWh for achieving a specific kWh reduction at individual stores. The MOU gave both sides more flexibility in how they reached the reduction goal. The MOU marked a second phase of engagement with NSTAR focused on custom energy efficiency solutions. Whole Foods has found this two-phased approach – building trust and confidence with standard incentive projects first, then tackling customized projects – to be an effective means of engagement with utilities.

Developing a Grocery-focused Energy Conservation Package
Whole Foods noted that many energy conservation measures (ECMs) incentivized by NSTAR focused on commercial office space applications, overlooking grocery-specific ECMs offering significant savings. Whole Foods worked with NSTAR to develop a grocery-focused energy efficiency incentive package addressing both new construction

and existing buildings. Grocery-specific technologies and strategies approved for incentives include:

- LED lighting upgrades for refrigerated horizontal cases and walk-in coolers
- LED lighting upgrades for refrigerated reach-in cases
- Electronically commutated (ECM) motors for refrigerated cases & walk-in refrigerators
- Anti-sweat heater controls for refrigerated cases
- Strip curtains for walk-in coolers and freezers to help mitigate cold air spill when the insulated doors are open for operations.
- Demand Control Kitchen Ventilation (DCKV) – Allows kitchen hoods to match cooking demands with fully variable exhaust and make up airflow rates, and automatically turn down/off when cooking equipment is not in use.
- Refrigeration System Replacement – upgrading older inefficient rack/condenser systems with modern, low refrigerant charge and evaporatively pre-cooled condensing systems.

Whole Foods also implemented a number of non-grocery-specific upgrades which were incentivized by NSTAR including:

- LED lighting upgrades for sales area/overhead lighting
- LED lighting upgrades for garage & parking lot lighting
- High-efficiency roof-top units (RTUs) replace old, inefficient ones
- Controls upgrades for building systems and refrigeration equipment -- Some acquired store systems were very old; upgrades allowed stores to create night set-backs and optimize equipment start/ stop times.

Future incentive opportunities may include:

- Variable Frequency Drives (VFDs) on main air handling units
- Testing the viability of Electronic Expansion Valves (EEVs), which would also allow for super-low head pressure condensing in cold climates
- Door retrofits for open refrigerated cases
- Enterprise-wide pilot for performance sub-metering and continuous commissioning.

Confidence in Savings

Utilities want to have confidence that the measures they incentivize will actually return energy savings. For some proposed measures, Whole Foods provided sub-meter data from pilot installations in its stores. NSTAR approved other measures in concept based on estimated savings from engineering calculations. Removing the sub-metering requirement for some incentives has significantly streamlined the project implementation process yielding faster energy reductions.

Fast-tracking Incentive Approval

NSTAR also facilitated the incentive application process by developing a custom application form, which can be used by customers who are not applying for the standard incentive offerings. Many utilities ask customers to “fit a square peg into a round hole” requiring completion of a standardized application even for specialized incentive proposals, which can cause confusion and extend application processing time. NSTAR’s custom form still requires customers to complete basic information, but offers free-form text boxes to gather information about existing and proposed systems and associated energy savings. The form also allows applicants to attach supporting documentation (cutsheets, case studies, savings calculations, etc.). Whole Foods’ energy management staff estimates that the streamlined approval process facilitated by

NSTAR has reduced project implementation time by 3-6 months, increasing the rate of kWh reduction and reducing administrative time.

- **Tools**
  - NSTAR Custom Incentive Application Form (blank)

Outreach

Following the successful collaboration with NSTAR, Whole Foods has reached out to utilities in markets where energy costs are particularly high or where the utility has a history of activity with incentives and rebates. In some cases, Whole Foods is able to leverage the NSTAR incentive package it developed with other utilities to begin the conversation about similar custom incentives.

Measuring Success

Whole Foods measures the success of its utility collaborations primarily in terms of energy saved at each store location.

Outcomes

Whole Foods has completed upgrades at 20 store locations in the North Atlantic region and received over $1 million in incentives from NSTAR. Through the NSTAR partnership alone, the grocer has estimated energy and maintenance savings of over 7 million kWh and $1.2 million annually. The following table details estimated savings from each measure approved and incentivized by NSTAR.

Energy Capital Upgrade (ECU) Projects	# Stores Implemented	Project Cost w/o Incentive ($)	Incentives ($)	Incentive (%)	Annual Reduction (kWh)	Annual Energy and Maintenance Cost Reduction ($)	Avg Annual Savings Contribution per Store (% kWh)
EC Motors - Case & Walk-ins	12	377,591	149,910	39.7%	1,348,028	$175,244	5.5%
Refrigerated Horiz Case & Walk-in Cooler LEDs	15	866,705	151,145	17.4%	1,064,139	$243,362	3.5%
Refrigerated Reach-In Case LEDs	14	182,127	39,315	21.6%	420,817	$70,422	1.5%
Sales Area/Overhead Lighting	16	1,261,829	262,416	20.8%	1,457,988	$249,697	4.5%
Garage & Parking Lot Lighting	2	50,829	3,901	7.7%	19,504	$22,696	0.5%

Controls Upgrade	13	812,378	327,355	40.3%	2,377,194	$309,035	9.0%
Strip Curtains	10	43,510	24,003	55.2%	136,338	$17,724	0.7%
HVAC - Munters Unit Replacement	2	228,826	68,466	29.9%	205,489	$96,459	5.1%
Refrigeration System Replacement	1	515,102	40,420	7.8%	202,102	$68,273	9.9%